

ZnO COMPOUND SEMICONDUCTOR LIGHT EMITTING ELEMENT AND PRODUCTION METHOD THEREOF

Patent number: WO0108229

Publication date: 2001-02-01

Inventor: NIKI SHIGERU (JP); FONS PAUL (JP); IWATA KAKUYA (JP); TANABE TETSUHIRO (JP); TAKASU HIDEKI (JP); NAKAHARA KEN (JP)

Applicant: JAPAN AS REPRESENTED BY SECRET (JP); ROHM CO LTD (JP); NIKI SHIGERU (JP); FONS PAUL (JP); IWATA KAKUYA (JP); TANABE TETSUHIRO (JP); TAKASU HIDEKI (JP); NAKAHARA KEN (JP)

Classification:

- international: H01L33/00; H01S5/343

- european: H01L33/00C4C2; H01L33/00C4C2B; H01S5/327

Application number: WO2000JP04998 20000726

Priority number(s): JP19990211222 19990726; JP19990211223 19990726

Also published as:

EP1199755 (A1)

US6674098 (B1)

Cited documents:

JP7283436

JP2000244015

JP2000101138

JP2000082842

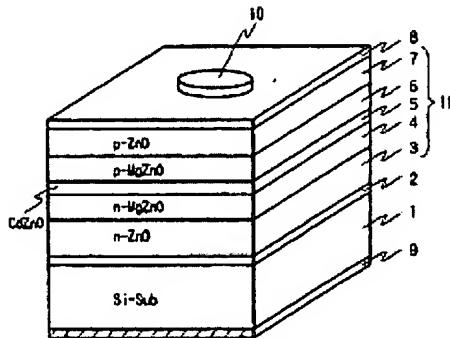
JP10256673

more >>

[Report a data error here](#)

Abstract of WO0108229

A silicon nitride film (2) is provided on a silicon substrate (1), and on the film (2) is laminated a semiconductor laminate (11) having at least n-type layers (3), (4) and p-type layers (6), (7) consisting of ZnO compound semiconductors so as to form a luminous layer. This silicon nitride film (2) is preferably formed by heat-treatment in an atmosphere containing nitrogen such as ammonia gas. In another embodiment, a luminous element or the like is formed by growing a ZnO compound semiconductor layer with a plane orthogonal to the C plane of a sapphire substrate used as a main plane, thereby providing a high-characteristic element using a ZnO compound such as an LED excellent in crystallinity and high in luminous efficiency.



Data supplied from the esp@cenet database - Worldwide